EEI Response to Chairmen Dingell and Boucher

1. Purpose of Portfolio Standards Proposals

a. Do you believe that adopting one or more Federal "portfolio-standard" requirements applied to sources of retail electricity, mandating that a given percentage of the power sold at retail come from particular sources, is an advisable Federal policy? Why or why not?

The Edison Electric Institute (EEI) firmly believes that federal mandatory renewable energy or efficiency portfolio standards are not the best way to achieve our energy, environmental and economic goals because they do not reflect state and individual utility variations in available resources and electricity use, could effectively be a tax on many customers, and are not the least-cost solution for producing electricity while reducing greenhouse gas (GHG) emissions and addressing other important environmental goals. Twenty-four states and the District of Columbia have adopted renewable portfolio standards (RPS) based on their resources and needs. Each jurisdiction has a very different mix of resources, timeframes, and goals. See Attachment 1, Comparison of Eligible Resources in Existing State RPS Mandates. A federal RPS would disrupt these programs, unnecessarily raise costs, and result in a transfer of wealth from regions that have limited or no renewable resources to regions that have renewable resources in greater supply. Rather, a more effective and appropriate federal role for promoting renewable resources is extending the relevant tax credits and R&D programs to address cost and implementation issues.

As a nation, our need to reduce GHG emissions and address other environmental and national security concerns while maintaining reliable and reasonably priced electricity requires the deployment of a full suite of technology options including renewable fuels; energy efficiency and demand-side management; smart grid

technologies; advanced clean coal including carbon capture and storage technologies; increased nuclear capacity and advanced nuclear designs; and plug-in hybrid electric vehicles.

Clearly, renewable energy is an important component of a diversified energy mix. Utilities are making major investments in renewable energy, with the result that wind energy is the fastest growing source of electricity generation, with an annual average growth rate from 2000 to 2005 of 21.1 percent.[1] EEI strongly supports at least a five-year extension of the renewable production tax credit, and extending the investment tax credit for solar energy for eight years, including eliminating the utility exclusion for the solar and geothermal investment tax credit. These are direct ways to spur development of renewable energy.

A federal RPS would have inequitable impacts because the availability of resources varies substantially by utility and region. See Attachment 2, Regional Variations in the Fuel Mix. States and utilities have long recognized the cost-effectiveness of relying primarily upon the natural resources that are most available to them. As the attached maps, prepared by the National Renewable Energy Laboratories, demonstrate, wind resources are most plentiful in the middle of the country and along mountain ridges, and require much new transmission infrastructure to serve population centers. See Attachment 3. Solar is concentrated in the Southwest. See Attachment 4. Geothermal potential is scattered and mostly limited to a few states in the West. See Attachment 5.

[1] Energy Information Agency (EIA), Annual Energy Review 2005.

While biomass is the most geographically diverse renewable (Attachment 6), we believe that production costs and risks are highly uncertain. The EIA's discussion of biomass states:

> [C]urrently there are very few coal plants that co-fire with biomass…[t]he infrastructure to reliably gather, process and deliver the available biomass to coal plants would have to be developed... However, few commercial biomass gasification operations currently exist, and capital costs for this technology are highly uncertain.[2]

Most states that have portfolio standards allow a broad variety of locally available resources to qualify for inclusion in their portfolio standards. Most states allow for more than 10 different resources, and some allow as many as 19 or 20 resources. See Attachment 1. Every state has eligible resources under its RPS program that would not qualify for a federal credit under the federal RPS mandates proposed to date. This includes resources like fuel cells, municipal solid waste and energy efficiency. This is one of the reasons that the Southeastern Association of Regulatory Utility Commissioners and the Florida Public Service Commission oppose a federal RPS, and the Western Governors' Association raised a number of concerns about state flexibility and other RPS issues. See Attachments 7, 8 and 9.

Under a typical federal RPS proposal, electric companies operating in regions without significant renewable resources would either purchase RECs from generators in renewable-rich areas or make compliance payments to the federal government. At the same time, those utilities would still have to ensure they have sufficient, reliable power sources to meet their customers' energy needs. For the customers of those utilities, a federal RPS mandate would be tantamount to an electricity tax that they would pay on

[2] EIA, Impacts of a 15-Percent Renewable Portfolio Standard at 13 (June 2007).

top of what they are paying for the electricity they actually use. If the program did not contain RECs or a price cap, then prices would be even higher to consumers.

Furthermore, even in regions with significant renewable resources, substantial transmission investments are often needed to deliver energy from a concentrated resource area to customers. Areas like West Texas and the central plains are discussing major new transmission line investments to transmit wind energy. Proposed transmission through Virginia and neighboring states to serve the mid-Atlantic region, which the Department of Energy has proposed to designate as a highly congested transmission corridor, would also help bring more wind energy resources to the eastern population centers. Unfortunately, the substantial opposition to the siting of new transmission facilities to serve congested areas serves as a sad reminder that despite our best intentions, it may be difficult to assure that all renewable energy that it is economic to develop will be deliverable to customers.

b. Is it appropriate for Government to impose generation-source conditions or energy savings requirements on load-serving utilities in order to serve public-policy purposes such as promotion of renewable energy production, energy efficiency and reduction of carbon emissions? Why or why not?

Many economic analyses indicate that there is a vast potential for reducing emissions by increasing energy efficiency in all sectors of the economy.[3] Electric utilities are committed to energy efficiency and have implemented many effective energy efficiency programs. Cumulative energy efficiency savings from 1989-2005 for all electric utility programs were 796.13 billion kWh. This amount is enough to power

[3] See "A Cost Curve for Greenhouse Gas Reduction," The McKinsey Quarterly, No. 1 (2007); K. Gillingham *et al*., "The Effectiveness and Cost of Energy Efficiency. Programs," Resources, Issue No. 155 (fall 2004)

73.91 million average U.S. homes for one year, and is equal to the annual electricity output of slightly more than 336 baseload power plants (rated at 300 megawatts).[4] New electric technologies, as well as smart meters and grid technologies, will play an important role in promoting and enabling such efficiencies. Electric utilities should be given credit when their activities achieve or facilitate measurable gains in energy efficiency.

However, some have advocated for a federal efficiency portfolio standard that would require utilities to cause their customers to reduce electricity use through efficiency improvements. Although EEI supports diverse measures to achieve energy efficiency, we do not support an efficiency portfolio standard mandate. Such a standard would impose the mandate on utilities, but meeting the mandate would be dependent on consumers' actions. While utilities can provide education, tools and incentives to promote efficiency and wise energy choices, end-use customers are responsible for their own energy use decisions. Since utilities cannot mandate customers to become more efficient, utilities should not be subject to efficiency mandates for customer uses, whether through an efficiency portfolio standard or otherwise.

Many end-use efficiency measures can best be achieved through use of national energy efficiency standards, local building codes, better labeling and other measures outside the control of utilities. EEI supports national energy efficiency standards. But it should be noted that the energy savings for climate-sensitive products will vary by region of the country due to differences in climate, building practices and other local factors. Thus, measurement of efficiency gains is best conducted at a state level.

[4] See EIA, Electric Power Annual 2005.

Moreover, regulation of end-use retail electric sales and measurement of efficiency gains traditionally has been left to the states. In most states, electric rate structures are based on sales volume, and utility companies lose money if sales decrease. A federal energy efficiency resource standard could create financial risks for electric companies unless states change their regulatory structure. A better approach is to encourage states to consider business and regulatory models that provide incentives for utility investment in cost-effective energy efficiency measures. Even then, care must be taken to avoid unintended consequences.

c. If you favor such a policy, how would you define its specific purpose?

EEI does not support federal renewable energy or efficiency portfolio standards.

d. If Congress were to adopt an economy-wide policy mandating reductions in emissions of greenhouse gases, including the electricity industry, would such a portfolio standard remain necessary or advisable?

No. Utilities should be given the flexibility to meet any GHG reduction requirements in the most cost-effective way, which likely would differ utility by utility and state by state. If Congress were to adopt an economy-wide policy mandating GHG reductions, then renewable generation portfolio programs might not be as cost effective as other approaches more directly targeted at reducing GHGs. Further, to the extent that such a federal RPS requirement was draining customer and utility financial resources, the utility industry would have fewer financial resources to make the substantial investments necessary to obtain needed generation or to reduce GHG emissions.

While renewable energy is an important component of any GHG reduction program, electric companies must have the opportunity to approach reductions in the most cost-effective manner, using the full spectrum of resources, including energy

efficiency, advanced clean coal technologies including carbon capture and storage, GHG offsets, nuclear generation, and plug-in hybrid or all-electric vehicles.

e. What analysis has been done of any portfolio standards requirement you endorse to demonstrate:

i. Its economic costs to consumers, nationally, and in various regions, in electricity rates?

ii. Its benefits in greenhouse gas emissions reductions?

iii. Its implications for electricity reliability, security, and grid management?

iv. Its implications for jobs and economic development?

v. Its implications for utility capital investment?

vi. Other relevant factors?

We have not endorsed any portfolio standard.

2. Portfolio Inclusions and Exclusions

a. What is the principle that should determine inclusion or exclusion of any energy source from an adopted portfolio standard? (i.e. excludes all fossil-fired generation, includes all generation that emits no GHG, excludes all generation below given energy-conversion efficiency, etc.)

b. What generation sources for retail electricity suppliers (including efficiency offsets) should be included and should be excluded from any mandatory portfolio requirement that is adopted? Please provide your reasons for excluding any sources.

If Congress were to decide to proceed with federal portfolio standards, then maximum care should be taken to assure flexibility to meet the standards as efficiently and cost-effectively as possible and to avoid disproportionate economic impacts. As indicated earlier, in formulating their own RPS programs, states have determined what resources are appropriate for their states and they should retain maximum flexibility to do so. Attachment 2 shows the wide variation of resources available and Attachment 1

shows the resources that states have included in their portfolio standard.) Some states have included energy efficiency as a resource because the cleanest energy is energy not used. These state decisions demonstrate that national averages of types of generation do not apply to individual utilities. Further, all utilities have existing portfolios of resources that are unique to that utility and were developed consistent with their available resources and state requirements.

Any effort to limit GHG emissions will require all available low emissions options, including renewable fuels; energy efficiency and demand-side management; smart grid technologies; advanced clean coal, including those with carbon capture and storage; nuclear power; and electric vehicles.

c. To the extent that multiple renewable energy sources and efficiency or other sources are eligible for inclusion, should any tiers among them or separate sub-requirements be adopted?

d. Should there be any distinction between existing and new sources of generation eligible for inclusion in the portfolio? If so, what would be the threshold date for eligibility?

There should be no tiers among, or sub-requirements limiting the use of, allowable energy resources. Such tiers or limits could reduce overall efficiency, distort the achievement of lowest-cost outcomes and lead to higher electricity prices. Extra credits may make sense to encourage deployment of promising technologies.

e. Would the electricity equivalent of useful thermal energy from eligible sources be credited against the requirement? Why or why not?

It is critically important that credits be awarded, if at all, only for efficiency gains and truly economic thermal energy purposes. However, given our experience with abuses under the Public Utility Regulatory Policies Act (PURPA), we believe that providing credits for useful thermal energy conversions would greatly complicate and

have the potential to seriously distort any program. Any credit program should focus on true efficiency gains and be careful to screen out fuel switching or other activities that could be undertaken to take advantage of new rules or programs without achieving any real increase in overall energy efficiency. The primary purpose of facilities that get credits for generating excess thermal energy should not be to sell electricity or credits; instead, the energy produced should be used primarily for industrial or commercial purposes. There should be real efficiency gains and real economic justification for thermal energy production. "Sham" industrial or commercial purposes should be excluded.

f. To the extent energy efficiency is included:

i. How would the required savings be measured and verified?

ii. Against what base consumption period (historic or projected)?

States should have the primary role in determining the best approaches for measuring and verifying energy efficiency gains. Many states already have considerable experience in this field. Because variations in climate, local building practices and other local factors can have a significant effect on efficiency gains, states are in the best position to take these factors into account. A single federal approach to measurement would not adequately take regional factors into account.

If efficiency gains are to be measured prospectively, any base period should be an average of a sufficient number of recent years to smooth out natural variations in weather, economic activity, prices and similar variables in order to create credible base-period average numbers.

3. Percentage Requirement and Timing

a. What target percentage of total retail power deliveries should be achieved by the required portfolio?

b. What is the target year for reaching the ultimate mandated portfolio percentage?

c. Should there be a straight-line, accelerating, or other form of ramp-up to the ultimate target percentage?

We do not support a federal renewable energy or efficiency mandatory portfolio standard. However, if there were a standard, then any target percentages, and the time when they would go into effect, must take into consideration what is practically achievable without harm to the economy and without causing any regional disparities or inequities, or unnecessary market distortions. This means they should allow a reasonable time frame for needed technological developments, resource availability, infrastructure availability (such as transportation for biomass and transmission for wind), and take into account the economic impact (at a minimum in terms of consumer electricity prices) and benefits derived from the target and timing of that target.

Compliance deadlines should be consistent with, and harmonized with, the availability of new and advanced technologies and with the timetables and goals of existing state portfolio standards and related programs. Technology deployment and economic realities should be paramount in the design of any federal targets to avoid premature requirements to make investments before technology is ready. Premature targets would divert investment from the development of advanced technologies that could achieve the legislative objectives more cost effectively.

d. Should there be any off-ramps or other built-in automatic changes in requirements as a function of contingencies? If so, what should they be? (e.g., price or cost thresholds, contingencies for natural or climate conditions, lack of adequate transmission, etc.)

Several provisions to address contingencies should be considered. First, a safety valve on credit costs, at a reasonable level, such as the option of purchasing credits, would be critical to reducing the costs of compliance. It should send a price signal that provides some protection against harm to the economy. In addition, a credit trading and banking program would help achieve the most efficient options. Also, there would need to be provisions to authorize exceptions from the program for economic factors, inadequate transmission, unforeseen circumstances and other appropriate situations.

If revenues from a safety valve were simply returned to the general Treasury, they would do little to promote investment in new renewable and clean energy technologies. Therefore, revenues from a safety valve should be segregated into an off-budget trust fund, not subject to annual appropriations. We would recommend using the fund for two specific purposes: 1) basic research and development (R&D) for "break-through" technologies associated with the legislative objective; and 2) research, development and demonstration (R, D & D) that help to promote renewable energy, energy efficiency, low-emitting generating technologies and other specific goals of the standard.

Finally, it would be important to periodically examine the state of technology, and allow for adjustments to targets and timetables if it were determined that technology development and deployment were lagging and the path was unrealistic. Any legislation in this regard should include a provision for periodic technology review (especially in terms of availability and cost) and a "reset" provision. One of the advantages of state portfolio standards compared to national standards is the greater ability of states to adjust

timetables and percentage requirements to reflect future technological and market realities.

4. Relationship to State Portfolio Standards and Utility Regulation

a. Should an adopted Federal portfolio set:

i. A minimum standard, allowing States to set or maintain higher targets?

ii. A preemptive standard, prohibiting States to set higher or different targets?

iii. Merely a mandate for a standard, allowing States to set their own targets at any level?

iv. Merely a given percentage target, allowing States to elect generation or efficiency sources eligible to meet it?

v. A standard applying only to States without prior portfolio requirements, grandfathering all prior standard programs?

States already are encouraging the development of renewable energy resources, based on their own unique circumstances and available resources. Each individual state should continue to have the maximum flexibility to promote renewable energy in the manner that works best for its electricity consumers, including timetables, targets, and generation and efficiency sources.

To date, 24 states and the District of Columbia have adopted some generation portfolio standard, based on their available renewable energy resources. More than 90 electric utilities in more than 30 states have implemented or announced green pricing programs to support investment in renewable energy technologies. Forty-eight states support programs that offer incentives, grants, loans or rebates to consumers using renewable energy resources. And electricity suppliers in nine states with competitive retail markets are offering green power products to consumers. States are moving

forward to promote renewable resources where the resources are available and when it makes economic sense for consumers, consistent with state policies on fuel diversity and energy supply.

Each state portfolio plan includes timetables and targets based on what that state determines makes sense in that particular state. Imposing different targets and timetables through a federal RPS on top of those state programs could undercut or preempt those efforts. For instance, nine of the 24 existing state plans would fail to meet a proposed federal RPS target of 15 percent by the year 2020, creating uncertainty and driving up the cost of meeting renewable mandates even further for electricity suppliers and consumers in those states.

A one-size-fits-all federal RPS mandate would ignore the available energy resources and economic needs of individual states. There are significant regional differences in availability, amount and types of renewable energy resources, resulting in different regions of the country relying on different fuel mixes. Even among states that have an RPS, all have chosen to add technologies that are not usually included in usual federal RPS proposals, such as fuel sources that may be unique to their areas. Many also include hydropower, as well as alternative means of compliance such as energy efficiency programs. A federal RPS mandate that does not include these technologies or programs would further undercut the states' efforts and drive up the cost to consumers of paying for two different RPS programs.

b. Can and should State regulatory agencies be required to pass through the costs of complying with Federal portfolio standards requirements in retail rates?

Yes. Cost recovery should be assured as part of any portfolio standard mandate, whether imposed at the federal or state level. Any costs reasonably incurred by electric utilities in order to comply with a mandatory portfolio standard, including costs of generating, purchasing and delivering renewable energy and costs of purchasing renewable energy credits, should be deemed "necessary and reasonable costs" and therefore should be fully recoverable in rates.

The appropriate regulatory authority must ensure that utilities would be able to fully recover the costs of complying with any RPS. Since states ultimately set the rates to consumers, states are in the best position to ensure cost recovery. This is an additional reason why there should be no imposition of federal portfolio standards.

5. Utility Coverage

a. Should any retail sellers of electricity be exempt from the portfolio requirement? (e.g., municipal utilities, rural cooperatives, utilities selling less than a minimum volume of power, unregulated marketers in States with competitive retail markets, etc.)

b. Should any standard apply to wholesale power markets or sales?

c. Should there be any basis for discretionary exemptions of certain States or utilities?

If a federal portfolio standard mandate were imposed, then it should apply as broadly as possible to achieve maximum benefits and fairness. There should be no exemptions for any type or class of retail sellers of electricity. Any requirement should apply to all utilities, including government-owned utilities; municipal and state utilities; and electric cooperatives, no matter what their size. If any type of utility were exempted

on the basis of size or ownership, then it would create inequities among utility customers and would result in a major competitive advantage for those exempted utilities. Exemptions also could give competitive advantages to certain areas of the country where the exempted utilities may predominate.

One option to consider would be a state opt-out, which would allow states to make their own determinations as to the need for specific resources within a portfolio or as to the economic impact of a federal standard. Other bases for exemption that could be considered by a state might include allowing consideration of technical infeasibility of meeting the standards (for example, a lack of sufficient transmission to bring renewable resources to load, lack of expected technology, or other factors).

6. Administration and Enforcement

a. Should a Federal Government entity enforce the requirement and decide on any exemptions?

i. If so, which one? (e.g. the Environmental Protection Agency? The Department of Energy? The Federal Energy Regulatory Commission? A newly created office or entity?)

ii. If not, should enforcement be delegated to the States or regional transmission of electric-system-operation entities?

A credit trading program associated with any federal portfolio standard must begin with a simple, reliable, transparent and credible process for issuing and certifying credits and identifying retail sales volumes. This is a governmental function, which could be accomplished at the state level, because states already have authority over retail electricity sales to consumers and they should have a role in determining which technologies are eligible for receiving credits. Alternatively, a federal agency such as the

Department of Energy (DOE) could administer the program using submitted retail sales data and state determinations of approved resources and facilities.

Expertise regarding electricity markets, the barriers to constructing needed facilities and the importance of maintaining reliability is essential if the agency is to properly exercise any authority to issue waivers or exemptions from the credit program. DOE and the Federal Energy Regulatory Commission have such expertise.

The function of enforcement is governmental in nature and should not be conducted by any participant in electric markets, including regional transmission organizations.

b. How should Federal and State enforcement be coordinated in States with their own portfolio requirements?

Any enforcement at the federal level must be coordinated with the states, including determination of the validity of credits issued and the appropriateness of requests for an exemption. States will have expertise in exemption issues as they affect reliability, prices or service to retail customers, and issues related to regulatory issues at the states such as delays in approval and construction of needed generation or transmission facilities. Separate and conflicting state and federal programs are likely to be inefficient and unnecessarily raise costs to customers. Coordination is essential for enforcement, as well as other implementation aspects to avoid redundancy and inequities.

c. What penalties should apply for failure of utilities to meet the percentage mandate?

As long as federal sales of and trading of credits are available, instances of non-compliance should be extremely rare and could be cured by the purchase of credits at the prevailing price. Penalties are never appropriate where factors beyond a utility's control

are involved. Thus, there should rarely be a need for penalties. Penalties would be appropriate only if there were a knowing and intentional decision to engage in a violation without adequate cause or mitigating circumstances.

7. Credits and Trading

a. Should tradable credits for qualifying generation be utilized as the mechanism for establishing compliance?

Yes. If there were a portfolio standard, then national level trading of credits would be highly desirable to try to drive the most cost-effective means of compliance for any portfolio standard.

b. Should credit trading be permitted or required on a national basis in order to achieve least-cost compliance with the portfolio standards?

Fungible national credits for qualifying generation and trading would allow companies to make the most economically efficient (*i.e.*, least-cost) decisions for compliance. A credit trading system could be implemented on a free-market basis without direct government involvement, subject to regulations similar to those imposed on other commodity trading markets.

c. Should there be a cap on credit values to limit costs?

A cap on credit values would be essential to keep costs and prices to consumers reasonable. Any credit trading program should be designed and administered in a manner that enables utilities to purchase credits at a reasonable price, in order to limit the cost impact of the program to consumers. As we have discussed above in response to Question 3d, revenues from federal government sale of such credits should not simply be returned to the Treasury, but should be used to develop, demonstrate and promote clean energy technologies.

d. As between a utility purchaser and a qualifying power generator, to whom should the portfolio standard credits be initially allocated?

e. What relationship, if any, should portfolio standard credits have to other State and Federal credit trading programs for SO2, greenhouse gases, or biofuels?

f. What requirements, if any, would there be concerning the length of contracts for qualifying generation and ownership of credit rights?

Credits should be allocated to the purchaser of electricity from a qualifying facility (QF) under PURPA, in the absence of specific contractual provisions to the contrary, where the sales from a QF are based on the utility purchaser's requirement to fulfill PURPA or a comparable state standard. Since a facility could only qualify to make sales under PURPA if it used renewable fuels or cogenerated, the nature of the fuel resource is an integral element of the transaction. It would only make sense to award the credit to the utility that was required to purchase the output of the PURPA facility.

Attachments

Comparison of Eligible Resources in Existing State RPS Mandates

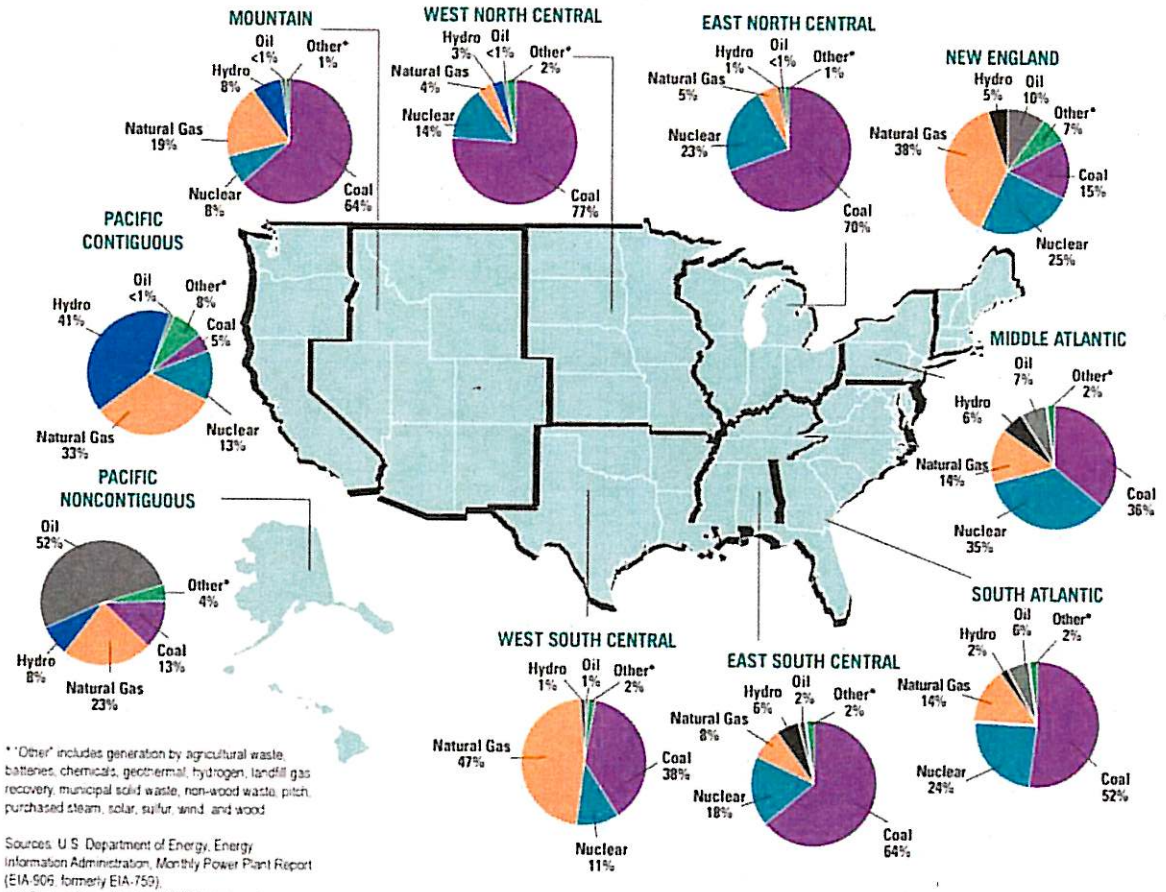
This chart compares the eligible resources that qualify under existing RPS programs in 24 states and the District of Columbia.

	Wind	Solar	Biomass	Landfill Gas	Geothermal	Ocean, Current, Wave or Tidal	Hydro (small, qualified, or incremental)	Fuel Cells (using eligible resources)	MSW/NTE/Res. Recovery	Biogas	Ocean thermal	Waste Water Treatment Gas	Bio-diesel/Bio-fuel	Dist. Gen. (eligible resources)	Energy Efficiency	On-site solar heating or AC	PURPA QFs	Demand Response	Demand Side Management	Effecient Cogeneration	IGCC	Load shifting	Mine Methane	Pumped Storage	Savings from solar water heat pump	Waste Coal	Waste Heat	Interruptable Load	Total Eligible Resources
AZ	x	x	x	x	x			x		x				x		x														9
CA	x	x	x	x	x	x	x	x	x	x	x																			11
CO	x	x	x	x	x		x	x				x		x	x													x		11
CT	x	x	x	x		x	x	x	x		x			x	x				x	x								x		14
DC	x	x	x	x	x	x	x	x	x		x	x																		11
DE	x	x	x	x	x	x	x	x		x																				9
HI	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x							x		x		19
IA	x	x	x				x		x								x													6
MA	x	x	x	x		x	x	x		x	x		x																		10
MD	x	x	x	x	x	x	x	x	x	x		x		x																	12
ME	x	x	x	x	x	x	x	x							x		x	x		x										x	13
MN	x		x				x	x																							4
MT	x	x	x	x	x		x	x		x		x		x																	10
NH	x	x	x	x	x	x	x	x		x	x	x	x	x																	13
NJ	x	x	x	x	x	x	x	x	x	x			x	x																	12
NM	x	x	x	x	x		x	x		x																					8
NV	x	x	x	x	x					x			x	x	x	x											x				11
NY	x	x	x	x		x	x	x	x	x	x		x	x																	12
OR	x	x	x	x	x	x	x	x	x	x	x	x		x			x														14
PA	x	x	x	x	x		x	x	x	x				x	x		x	x	x		x	x	x	x		x	x				20
RI	x	x	x	x	x	x	x	x		x	x		x	x																	12
TX	x	x	x	x	x	x	x							x			x														9
VT	x	x	x	x	x		x	x		x		x	x	x						x											12
WA	x	x		x	x	x	x					x	x	x																	9
WI	x	x	x	x	x	x	x	x																							8

Source: Edison Electric Institute (EEI)
As of 6/8/07

Attachment 1

Regional Variations in the Fuel Mix



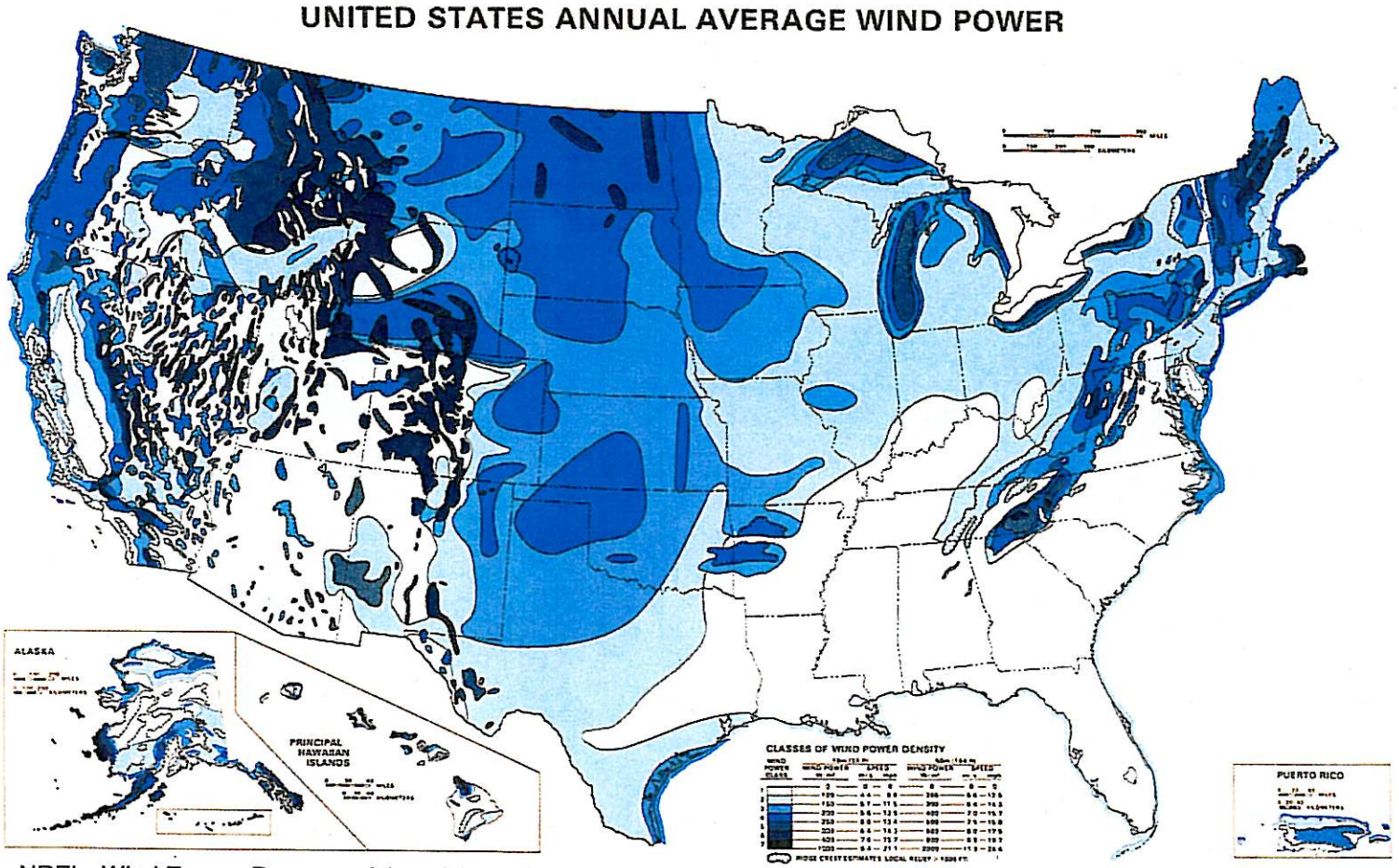
* "Other" includes generation by agricultural waste, batteries, chemicals, geothermal, hydrogen, landfill gas recovery, municipal solid waste, non-wood waste, pitch, purchased steam, solar, sulfur, wind, and wood.

Sources: U.S. Department of Energy, Energy Information Administration, *Monthly Power Plant Report* (EIA-906, formerly EIA-759), and *Electric Power Monthly* (2005 Preliminary)

EEI

Attachment 2

Wind Power

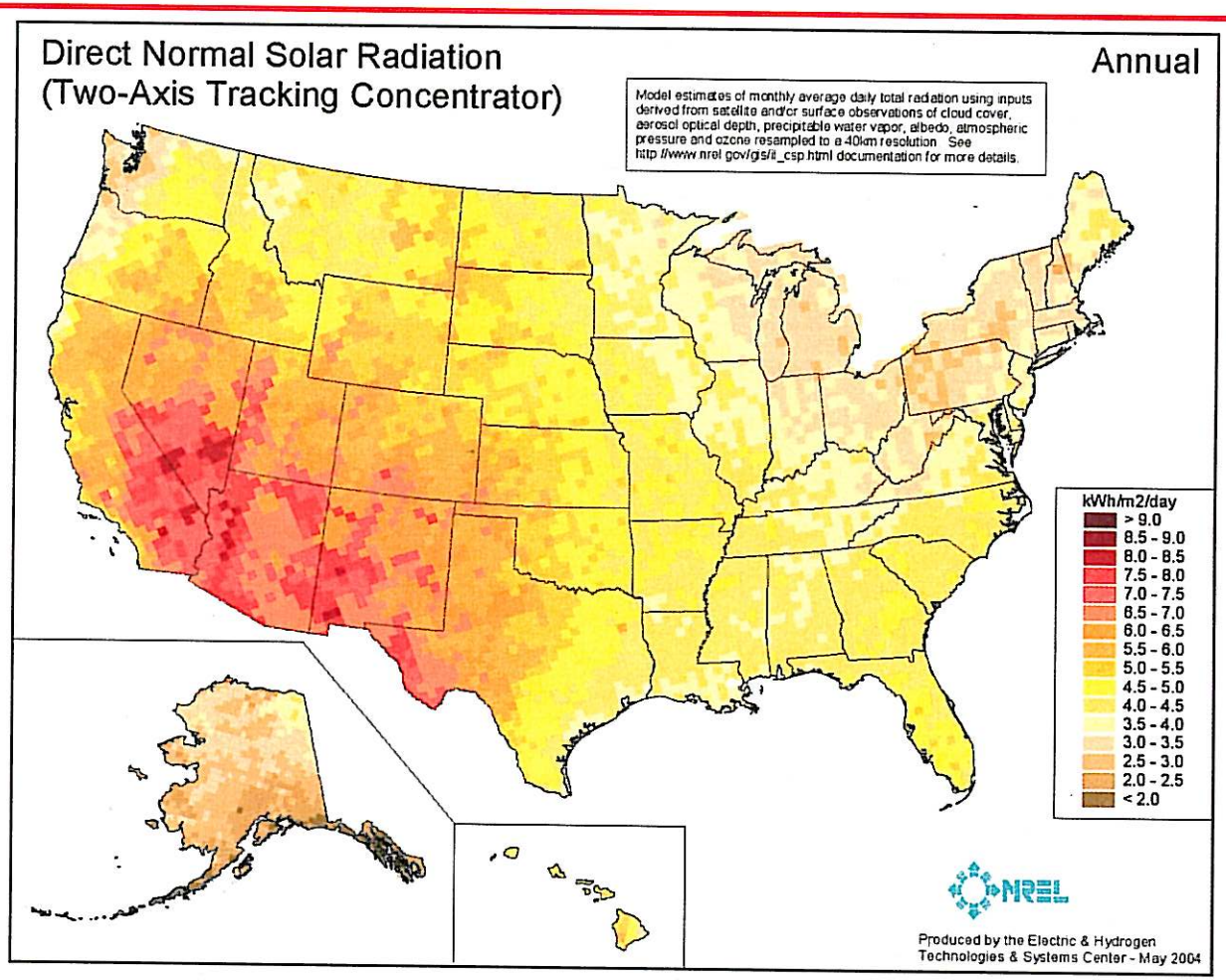


Source: NREL, *Wind Energy Resource Atlas of the United States*

EEI

Attachment 3

Solar Radiation – Tracking Concentrator

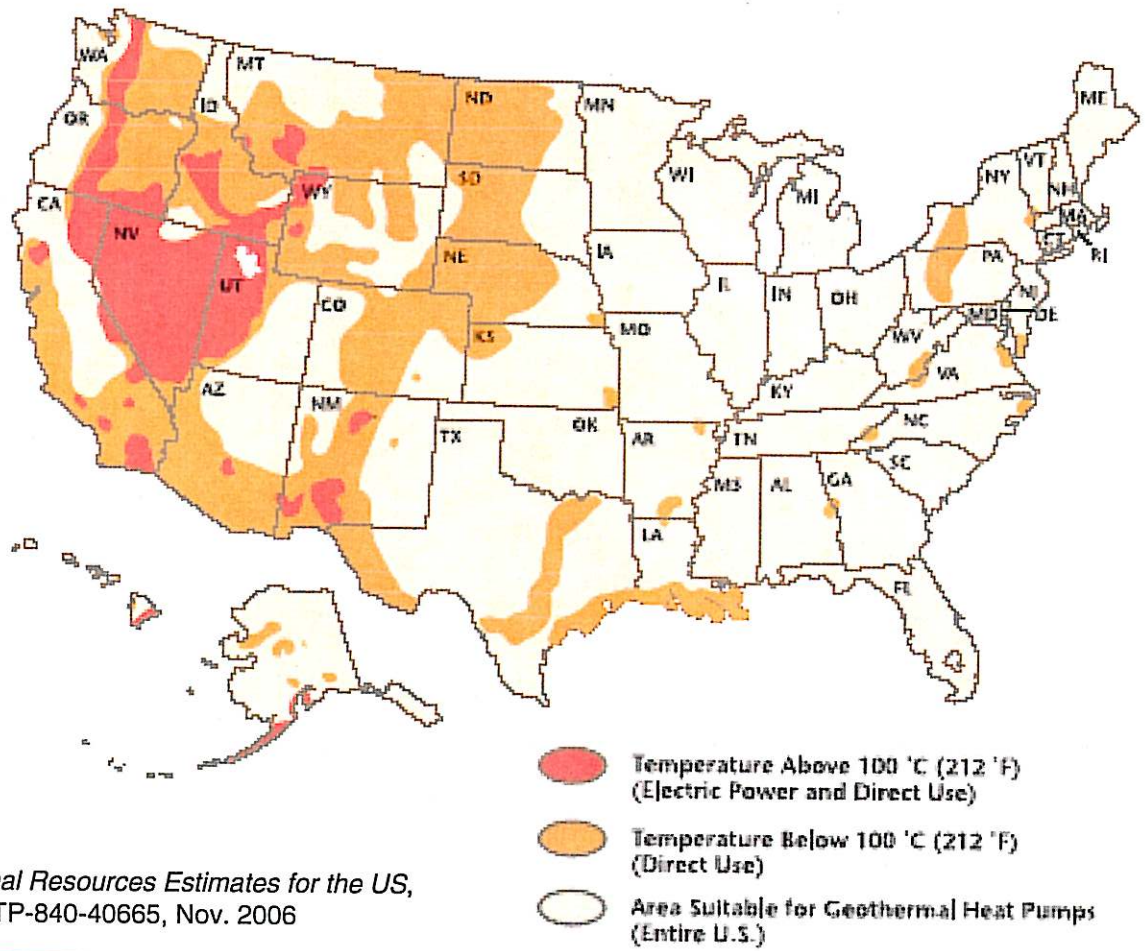


Source: NREL

EEI

Attachment 4

Geothermal Resources

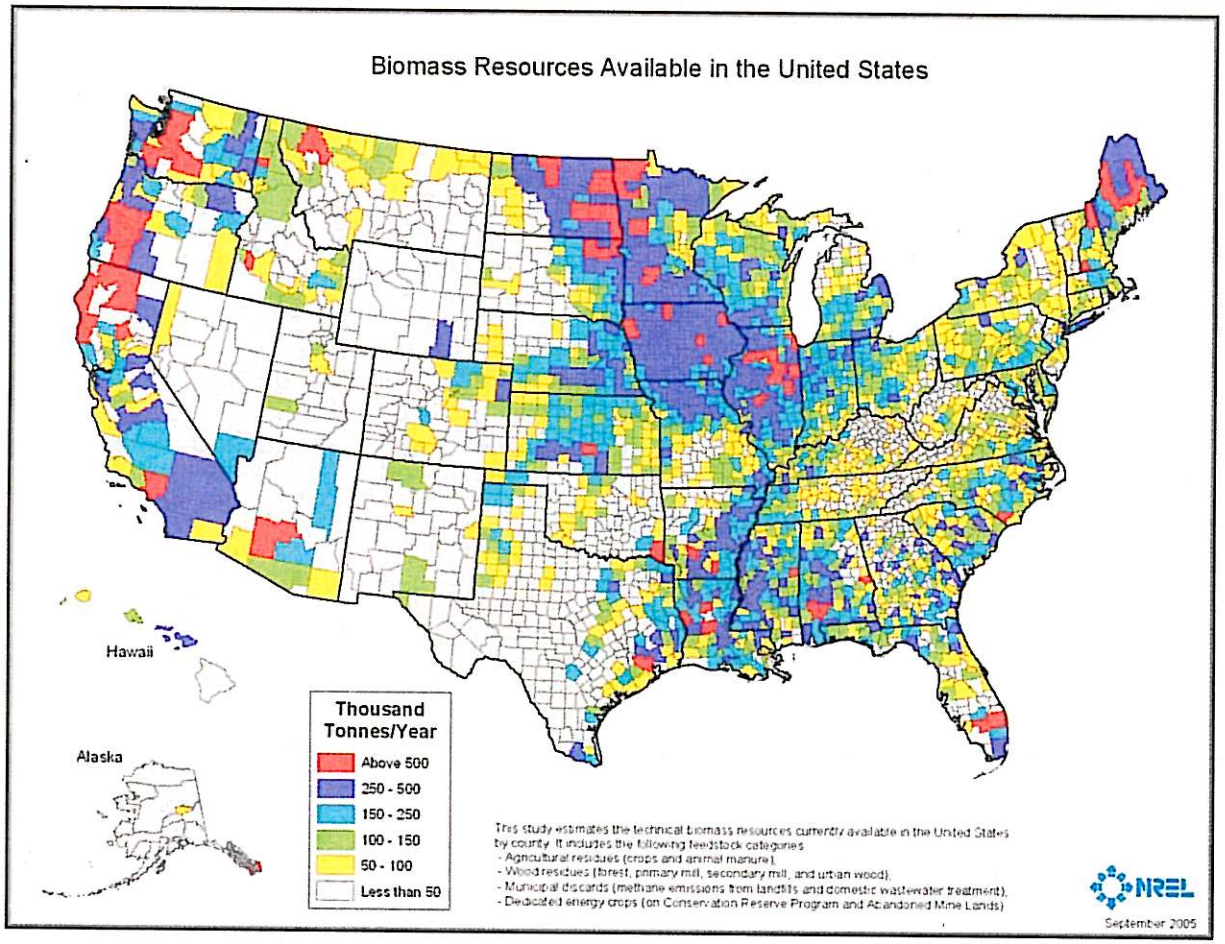


Source: NREL, *Geothermal Resources Estimates for the US*, Technical Report, NREL/TP-840-40665, Nov. 2006

EEI

Attachment 5

Biomass Resources



Source: NREL

EEI

Attachment 6

SOUTHEASTERN ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS

Daryl E. Bassett
PRESIDENT
ARKANSAS PUBLIC SERVICE COMMISSION
POST OFFICE BOX 400
LITTLE ROCK, AR 72203-0400
501-682-1453
FAX 501-683-3670
dbassett@psc.state.ar.us

SALLIE KEMPTON
EXECUTIVE DIRECTOR
GEORGIA PUBLIC SERVICE COMMISSION
244 WASHINGTON STREET, SW
ATLANTA, GA 30334
404- 657-4574
FAX 404 -657-4576

◆ALABAMA
PUBLIC SERVICE COMMISSION

◆ARKANSAS
PUBLIC SERVICE COMMISSION

◆FLORIDA
PUBLIC SERVICE COMMISSION

◆GEORGIA
PUBLIC SERVICE COMMISSION

◆ KENTUCKY
PUBLIC SERVICE COMMISSION

◆LOUISIANA
PUBLIC SERVICE COMMISSION

◆MISSISSIPPI
PUBLIC SERVICE COMMISSION

◆NORTH CAROLINA
UTILITIES COMMISSION

◆SOUTH CAROLINA
PUBLIC SERVICE COMMISSION

◆TENNESSEE
REGULATORY AUTHORITY

May 31, 2007

Dear Senators Bingaman and Domenici, and Congressmen Dingell and Barton:

The undersigned state utility commissioners are writing to express our concerns about the nationwide, mandatory federal renewable portfolio standard (RPS) being discussed/introduced by Senator Bingaman. As state regulators, we are responsible for ensuring that retail electricity consumers receive affordable, reliable electric service. We are concerned that a uniform, federal RPS mandate fails to recognize adequately that there are significant differences among the states in terms of available and cost-effective renewable energy resources and that having such a standard in energy legislation will ultimately increase consumers' electricity bills.

The reality is that not all states are fortunate enough to have abundant traditional renewable energy resources, such as wind, or have them located close enough to the load to render them cost-effective. This is especially true in the Southeast and large parts of the Midwest. Even in regions of the country that do have access to wind energy, there is frequently stiff local opposition to building huge wind turbines, significant costs for the additional transmission needed, and reliability concerns. As a result, some wind renewable energy projects do not get built, while others take years to build. The availability of other renewable energy resources, such as geothermal, is even more limited.

Because of the limited availability and cost-effectiveness of traditional renewable energy resources, we are deeply concerned that our utilities will be forced to buy renewable energy credits from the federal government or from renewable energy generators in other regions of the country. Correspondingly, our retail electricity consumers will end up paying higher electricity prices, with nothing to show for it.

Renewable energy resources may be able to make a significant contribution to energy production in those regions of the country that have abundant renewable resources. In fact, over 20 states and the District of Columbia have already seen fit to approve their own RPS programs based on the resources available to them. Moreover, those states have included a wider array of energy resources in their definitions of eligible renewable resources than the proposed federal RPS mandate. Some states consider power produced from municipal solid waste, small hydroelectric facilities or coal waste to be renewable energy. Other states count expenditures on demand-side management or alternative compliance payments toward meeting the state RPS requirements. None of these alternative renewable energy resources, however, would receive credit under the Senate version of a federal RPS program.

While state public service commissions and energy service providers should certainly consider available and cost-effective renewable energy resource options as they make long-term decisions for incremental energy needs, the imposition of a strict federal RPS mandate, as contrasted with a state-driven cost-effectiveness determination, will only result in higher electricity prices for our consumers. Because the availability and cost-effectiveness of traditional renewable energy resources varies so widely among states and regions, we believe that decisions regarding renewable energy portfolios should be left to the states. If, however, the Congress desires to address renewable energy objectives in the upcoming Energy Bill, we urge you to expressly allow each individual state to determine the extent to which renewable energy can be reliably and cost-effectively utilized within that state.

Sincerely,

STATE OF ALABAMA

ALABAMA PUBLIC SERVICE COMMISSION
P.O. BOX 304260
MONTGOMERY, ALABAMA 36130-4260

JIM SULLIVAN, PRESIDENT
JAN COOK, ASSOCIATE COMMISSIONER
SUSAN D. PARKER, PHD, ASSOCIATE COMMISSIONER

WALTER L. THOMAS, JR.
SECRETARY

Jim Sullivan, President

Jan Cook, Associate Commissioner

Susan D. Parker, Associate Commissioner

Paul Suskie
Chairman
(501) 682-1451

Sandra L. Hochstetter
Commissioner
(501) 682-1455

Daryl E. Bassett
Commissioner
(501) 682-1453

ARKANSAS
PUBLIC SERVICE COMMISSION
1000 Center
P.O. Box 400
Little Rock, Arkansas 72203-0400
http://www.Arkansas.gov/psc

Paul Suskie, Chairman

Sandra L. Hochstetter, Commissioner

Daryl E. Bassett, Commissioner

Georgia Public Service Commission

(404) 656-4501
(800) 282-5813

244 WASHINGTON STREET, S.W.
ATLANTA, GEORGIA 30334-5701

FAX: (404) 656-2341
www.psc.state.ga.us

Chairman Robert Baker
Georgia Public Service Commission

Commissioner Doug Everett
Georgia Public Service Commission

Commissioner Stan Wise
Georgia Public Service Commission

Vice Chairman Chuck Eaton
Georgia Public Service Commission

Mark David Goss
Chairman
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

John W. Clay
Commissioner
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

Louisiana Public Service Commission

DISTRICT I
CHAIRMAN JACK "JAY" A. BLOSSMAN

DISTRICT III
VICE CHAIRMAN LAMBERT C. BOISSIERE, III

DISTRICT IV
COMMISSIONER C. DALE SITTIG

DISTRICT II
COMMISSIONER JAMES M. FIELD

DISTRICT V
COMMISSIONER FOSTER L. CAMPBELL

Mississippi Public Service Commission

Post Office Box 1174
201-A Woolfolk State Office Building
Jackson, Mississippi 39215-1174

(601) 961-5430
(800) 356-6430
(601) 961-5824 Facsimile

Nielsen Cochran
Chairman

NORTH CAROLINA UTILITIES COMMISSION

Edward S. Finley, Jr., Chairman

Robert V. Owens, Commissioner

Sam J. Ervin, IV, Commissioner

Lorinzo L. Joyner, Commissioner

James Y. Kerr, II, Commissioner

Howard N. Lee, Commissioner

William T. Culpepper, III, Commissioner

South Carolina Public Service Commission

G. O'Neal Hamilton, Chairman

C. Robert Moseley, Vice-Chairman

John E. "Butch" Howard, Commissioner

David A. Wright, Commissioner

Randy Mitchell, Commissioner

Elizabeth B. "Lib" Fleming, Commissioner

Mignon L. Clyburn, Commissioner

Sara Kyle, Chairman
Tennessee Regulatory Authority

Eddie Roberson, Director
Tennessee Regulatory Authority

Pat Miller, Director
Tennessee Regulatory Authority

LISA POLAK EDGAR
CHAIRMAN

STATE OF FLORIDA

CAPITAL CIRCLE OFFICE CENTER
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850
(850) 413-6044

Public Service Commission

June 11, 2007

The Honorable Mel Martinez
United States Senate
356 Russell Senate Office Building
Washington, DC 20510

The Honorable Bill Nelson
United States Senate
716 Hart Senate Office Building
Washington, DC 20510

Dear Senators Martinez and Nelson:

Use and investment in renewable and alternative energy is in the best interest of Florida's retail consumers, economy, environment and energy future; however, a federally mandated one-size-fits-all renewable portfolio standard is not.

The Florida Public Service Commission respectfully requests that you oppose efforts to impose this kind of national renewable energy standard, or RPS, on states. As regulators and public officials, our statutory charge is to ensure safe, affordable and reliable electric service. We are concerned that a federally mandated RPS could increase the cost of service for all consumers and businesses who use and pay for electricity, while providing no incentive for investment in Florida or benefit to the customers in return for those higher bills.

The Florida Public Service Commission strongly supports renewable and alternative energy generation and we are working proactively on policies to promote investment in these technologies in Florida. We have a statutory commitment to increase fuel diversity and we continue to be a leader in demand side management initiatives. Florida's energy future is bright.

A national mandate that limits state action by narrowly defining which technologies would qualify for inclusion in a renewable portfolio would disadvantage our citizens and businesses. We respectfully request that you oppose any one-size-fits-all federal RPS mandate on the states.

We look forward to working with you on these important issues.

Sincerely,

Lisa Polak Edgar
Chairman

Matthew M. Carter II
Commissioner

Katrina J. McMurrian
Commissioner

Nathan A. Skop
Commissioner

LPE/css

cc: Hon. Jeff Bingaman, U.S. Senate
Hon. Pete V. Domenici, U.S. Senate
Hon. Joe Barton, U.S. House of Representatives
Hon. John D. Dingell, U.S. House of Representatives
Hannah Walker, State of Florida Washington Office

WESTERN GOVERNORS' ASSOCIATION

Western Governors' Association
Policy Resolution 07-16

Transitioning the West to Clean Energy and Energy Security

A. BACKGROUND

1. Western Governors strongly believe that a clean, diverse, reliable, and affordable energy supply that moves us toward greater energy security is among the highest of our nation's priorities.

2. Traditional and renewable resources such as oil, natural gas, coal, nuclear, hydropower, wind, solar, geothermal, and biomass have played and will continue to play a significant role in meeting future energy needs. The combination of these resources provides the foundation for a clean, diversified and secure energy future for the West.

3. The West has an abundance of traditional natural resources such as coal and natural gas, and the greatest potential for renewable resources such as solar, wind, geothermal, biomass, and hydropower.

4. Energy efficiency is the easiest, least expensive and least controversial way to reduce energy demand. In fact, by adopting current "best practices" states can achieve substantial energy savings. Tremendous opportunities exist, especially in the areas of new construction and public buildings management.

5. Nearly 18% of the electricity in territory represented by WGA is from hydropower, which provides electrical generating capacity by utilizing the natural energy created through the West's vast network of streams, rivers, and coastlines.

6. While coal gasification technologies hold great promise, there are other advanced coal technologies that may be able to produce near-zero emissions.

7. Western Governors agreed to collaborate and offer their support for regional and sub-regional initiatives being undertaken among Western states to improve the balance and overall adequacy of renewable and traditional energy resources in a manner which will strengthen economic growth, promote energy price stability, mitigate environmental impact, maximize reliability and result in an abundance of diversified resource supplies; and

B. GOVERNORS' POLICY STATEMENT

1. Western Governors support hydropower research and development funding for emerging hydrokinetic/ocean technologies and new turbine advancements for traditional hydropower technology. The Western Governors also support regulations that will

promote the development of small hydropower potential and related emerging technologies in environmentally responsible ways. The Western Governors also support the expansion of federal production tax credits to include small hydropower, hydropower at non-hydro dams, hydrokinetic/ocean technologies and hydropower that existed prior to 2007 that satisfies one of the following two criteria: 1) increased capacity, 2) used to firm or regulate other renewable energy resources.

2. Western Governors believe that improving the economic viability of renewable resources is critical to their continued expansion in the west. Federal efforts toward the funding of research and development of innovative technologies will help reduce the cost of developing solar, wind, geothermal and biomass projects. Additionally, the Western Governors support the long-term reauthorization of renewable production tax credits, which will allow developers to utilize the credits in long-term financial planning.

3. Western Governors agree that any federal renewable portfolio standard must not limit a respective state's ability to develop the most advantageous mix of clean energy resources. The governors also agree that any renewable portfolio standard should consider the following:

    - A party required to comply with a federal renewable portfolio standard should not be exempted from compliance with a state standard. In addition, a party required to meet a state renewable standard that exceeds a federal standard should not be allowed to credit the excess renewable energy required under the state standard toward another state for purposes of meeting a federal standard.
    - Any renewable portfolio standard should consider the availability of transmission or the time necessary to construct transmission lines to new generating facilities.
    - Any federal renewable portfolio standard should consider the difference in impacts for large investor owned utilities and smaller municipal utilities and rural electrification associations and public or people's utility districts and allow for appropriate sizing and transition timelines in the form of interim compliance targets.
    - Utilities should be allowed to recover their prudently-incurred costs associated with meeting a federal renewable standard. However, it also is important that a federal renewable portfolio standard protect energy consumers from significant and unexpected rate increases by including an appropriate cost-cap or other 'off ramp' mechanism that ensures energy consumers are not unreasonably impacted by new investments in renewable energy and related investments in transmission, etc.
    - To further protect consumers against market uncertainties, a federal renewable portfolio standard should include an option that allows utilities to pay into a fund in lieu of achieving the standard. The alternative compliance payment should be based on a formula that considers the average market cost for renewable resources. Money in the fund should be controlled by the state in which it was collected and dedicated to achieving the underlying goals of an

RPS, including but not limited to acquiring renewable resources at a later date, investing in conservation programs and/or supporting research and development related to emerging renewable energy technologies.

- Any renewable portfolio standard should give equivalent credit to renewable distributed generation systems or otherwise support community scale renewable energy projects of less than 20 MW.
- Reductions in energy demand and improved energy efficiency can provide valuable time to solve transmission problems and develop emerging technologies.
- Any renewable portfolio standard should take into account resource availability within a respective state, technology availability, environmental considerations, and financial risk and provide for opportunities to meet a national RPS standard through nationally traded renewable energy credits.

4. States should have flexibility to determine the appropriate mix of demand side efficiencies and supply side renewable resources. Reductions in energy demand can provide valuable time to solve issues related to transmission or emerging technologies. Utilities should be given incentives to implement energy efficiency programs that limit the need to construct new generating facilities.

5. Western Governors call for adequate funding to support the USGS compilation of state based assessments of sequestration sites (the national carbon atlas) and also fund the carbon sequestration partnerships to further identify large scale (one million tons or more) sequestration sites and test carbon dioxide sequestration at multiple large-scale sites across the states.

6. Western Governors agree that realizing expeditious large scale sequestration of carbon dioxide requires major research and funding, including:

    - Adequate federal funding for the identification and mitigation of any risks and liabilities associated with carbon sequestration;
    - Adequate federal funding to support the identification and development of CO2 pipeline infrastructure necessary to transport CO2 to sequestration areas;
    - Development of regulations that provide for legal consistency in the treatment of CO2, whether it is sequestered through enhanced oil recovery or in designated sequestration storage areas;
    - Development of federal tax credits to be awarded for the capture and sequestration of CO2.

7. Western Governors agree that there must be support for any advanced coal technology that results in near-zero emissions, and that the Congress must support adequate performance-based research and development and must move as quickly as possible to achieve the wide deployment of near-zero emissions technologies as referenced in the Clean and Diversified Energy Report Further, the Western Governors agree that multiple pilot projects for a variety of different near-zero emission coal technologies using

Western coal should be funded by the Department of Energy. Finally, the Western Governors agree that there should be additional appropriations for federal tax credits beyond those initially identified in the EPAct, and that these tax credits should apply to any near-zero emissions coal technology.

C. GOVERNORS' MANAGEMENT DIRECTIVE

1. The Western Governors direct the WGA staff to conduct a workshop to determine the most expeditious way to achieve energy efficiency savings from new and existing residential and commercial/public buildings. The workshop should focus on incentives for builders, municipalities and counties to increase energy efficient construction beyond current international energy conservation codes requirements, removal of barriers for utility energy efficiency programs, and project financing.

2. The Western Governors direct WGA staff to hold a forum on transmission needs to accommodate the integration of large amounts of renewable generation in the Western power system.

3. The Western Governors' direct the WGA staff to develop a report outlining how to more effectively utilize existing hydropower facilities and more effectively using small hydro potential.

4. The Western Governors direct the WGA staff to develop a report analyzing the impact of a federal renewable portfolio standard in the West and developing recommendations for the appropriate implementation of any national renewable portfolio standard.

5. The Western Governors direct the WGA staff to work with federal agencies and trade associations to identify research funding necessary to identify and mitigate the risks and liabilities associated with carbon sequestration, develop a pipeline transport system that can move carbon dioxide to enhanced oil recovery and sequestration areas, and develop legal consistency in the treatment of carbon dioxide.

6. The Western Governors direct staff to work with the appropriate federal agencies to secure adequate funding for near-zero emission pilot facilities, identify tax credits to be made available to all near-zero emission technologies, and develop a mechanism for awarding tax credits to companies capturing and sequestering carbon.

7. The Western Governors direct the WGA staff to conduct a workshop to examine accelerating the deployment of near-zero emissions coal technology, financing advanced generation facilities, understanding the current status of carbon capture technology, and resolving legal and liability issues surrounding carbon sequestration.

8. The Western Governors direct the WGA staff to conduct a feasibility workshop to determine the most effective way to leverage federal funds to research and develop

innovative technologies toward a goal of reducing the cost to develop solar, wind, geothermal, bio-fuel and biomass projects in the West.

9. The Western Governors direct the WGA staff to provide Congress the necessary information to convey its position in support of a long-term reauthorization of renewable production tax credits which are critical to expansion of renewable energy in the West.

F:\07 resos\Clean-energy.doc